



PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

(Chapter II of the Patent Cooperation Treaty)

Rec'd PCT/PTO 24 JAN 2005

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference PF020094		FOR FURTHER ACTION		See Form PCT/IPEA/416
International application No. PCT/EP 03/07332		International filing date (day/month/year) 08.07.2003		Priority date (day/month/year) 24.07.2002
International Patent Classification (IPC) or national classification and IPC G11B27/32				
Applicant THOMSON LICENSING SA et al.				
<p>1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of 5 sheets, including this cover sheet.</p> <p>3. This report is also accompanied by ANNEXES, comprising:</p> <p>a. <input checked="" type="checkbox"/> sent to the applicant and to the International Bureau) a total of 3 sheets, as follows:</p> <p><input checked="" type="checkbox"/> sheets of the description, claims and/or drawings which have been amended and are the basis of this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).</p> <p><input type="checkbox"/> sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.</p> <p>b. <input type="checkbox"/> (sent to the International Bureau only) a total of (indicate type and number of electronic carrier(s)) , containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).</p>				
<p>4. This report contains indications relating to the following items:</p> <p><input checked="" type="checkbox"/> Box No. I Basis of the opinion</p> <p><input type="checkbox"/> Box No. II Priority</p> <p><input type="checkbox"/> Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</p> <p><input type="checkbox"/> Box No. IV Lack of unity of invention</p> <p><input checked="" type="checkbox"/> Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</p> <p><input type="checkbox"/> Box No. VI Certain documents cited</p> <p><input checked="" type="checkbox"/> Box No. VII Certain defects in the international application</p> <p><input checked="" type="checkbox"/> Box No. VIII Certain observations on the international application</p>				
Date of submission of the demand 10.02.2004		Date of completion of this report 17.12.2004		
Name and mailing address of the international preliminary examining authority:  European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523656 epmu d Fax: +49 89 2399 - 4465		Authorized Officer D'Attilia, M Telephone No. +49 89 2399-7624 		

**INTERNATIONAL PRELIMINARY REPORT
ON PATENTABILITY**

International application No.
PCT/EP 03/07332

Box No. I Basis of the report

1. With regard to the **language**, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.
- ☐ This report is based on translations from the original language into the following language , which is the language of a translation furnished for the purposes of:
- ☐ international search (under Rules 12.3 and 23.1(b))
 - ☐ publication of the international application (under Rule 12.4)
 - ☐ international preliminary examination (under Rules 55.2 and/or 55.3)
2. With regard to the **elements*** of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report):*

Description, Pages

1-10 as originally filed

Claims, Numbers

1-9 filed with telefax on 19.08.2004

Drawings, Sheets

1/3-3/3 as originally filed

- ☐ a sequence listing and/or any related table(s) - see Supplemental Box Relating to Sequence Listing
3. ☐ The amendments have resulted in the cancellation of:
- ☐ the description, pages
 - ☐ the claims, Nos.
 - ☐ the drawings, sheets/figs
 - ☐ the sequence listing (*specify*):
 - ☐ any table(s) related to sequence listing (*specify*):
4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).
- ☐ the description, pages
 - ☐ the claims, Nos.
 - ☐ the drawings, sheets/figs
 - ☐ the sequence-listing (*specify*):
 - ☐ any table(s) related to sequence listing (*specify*):

* If item 4 applies, some or all of these sheets may be marked "superseded."

**INTERNATIONAL PRELIMINARY REPORT
ON PATENTABILITY**

International application No.
PCT/EP 03/07332

Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes: Claims	1-9
	No: Claims	
Inventive step (IS)	Yes: Claims	1-9
	No: Claims	
Industrial applicability (IA)	Yes: Claims	1-9
	No: Claims	

2. Citations and explanations (Rule 70.7):

see separate sheet

Box No. VII Certain defects in the international application

The following defects in the form or contents of the international application have been noted:

see separate sheet

Box No. VIII Certain observations on the international application

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:

see separate sheet

**INTERNATIONAL PRELIMINARY
REPORT ON PATENTABILITY
(SEPARATE SHEET)**

International application No.

PCT/EP 03/07332

1. The following documents (D1, D2 and D3) are referred to in this communication; the numbering will be adhered to in the rest of the procedure:

D1: GB-A-2 349 460 (MITSUBISHI ELECTRIC INF TECH) 1 November 2000 (2000-11-01)

D2: US-A-6 064 676 (GRATACAP REGIS ET AL) 16 May 2000 (2000-05-16)

D3: FR-A-2 253 434 (HONEYWELL BULL SOC IND) 27 June 1975 (1975-06-27)

2. Claim 1

- 2.1 The application does not meet the requirements of Article 6 PCT because claim 1 is not clear.

In particular it is not clear to what the "description units" (line 3) and the "structure information" relate and which kind of information they contain, since these expressions are not previously defined (it is noted that such terms can be considered as known only for streams coded in accordance to the MPEG standard). Moreover it is not clear (lines 8-9) how it is possible that the "description units" can be used before their complete creation.

Furthermore it is also not clear the usage of the term "associated"; line 14 refers to "said associated description units" but only "associated descriptors" are defined.

- 2.2 Although, due to the above clarity problems, it is not possible any significative examination for novelty and inventive step at this stage, it appears that the subject-matter of claim 1 meets the requirements of Article 33(2) and (3) PCT.

D2 (D2, col. 6, lines 41-43; col. 14, lines 52-54; col. 15, lines 14-16; fig. 1, cache memory = memory buffer) discloses a device for processing data descriptors units in which the descriptor units are memorized in memory buffer prior their recording on a recording medium and in which the same memory buffer is used for the construction and utilization of the description units.

The subject-matter of claim 1 differs from D2 in that when the data stream is recorded and simultaneously read and rfrom the recording and the "associated" description units are not yet available in the recording medium the "associated" description units are read directly in the memory buffer before their transfer on the recording medium.

The above difference permit to playback the data stream simultaneously to its recording as consequence claim 1 would appear to comprise subject matter which is not known from the available prior art nor rendered obvious therefrom.

3. Claims 8 and 9

Claims 8 and 9 disclose a program and a device corresponding to the subject-matter of claim 1, hence what stated in paragraph 2 of this communication is also applicable to claims 8 and 9.

4. Claim 2

The application does not meet the requirements of Article 6 PCT because claim 2 is not clear.

In particular it is not clear what (of what) a "sequence" is.

5. Contrary to the requirements of Rule 5.1(a)(ii) PCT, the relevant background art disclosed in the documents D1, D2 and D3 is not mentioned in the description, nor is this document identified therein.

Claims

1. Method of processing digital data descriptors stored in the form of
5 description units (25, 35) of predetermined size, in which
 - description units (25, 35) are constructed and stored in memory buffers (20, 30, 300a, 300b, 300c, 300d) prior to their recording on a recording medium (11, 108),
 - description units (25, 35) are utilized simultaneously with the
10 construction and with the recording of description units (25, 35) of the same stream,characterized in that
 - one and the same memory buffer (20, 30, 300a, 300b, 300c, 300d) is used for the construction and the utilization of the description units
15 (25, 35).
2. Method according to Claim 1 characterized in that the data being grouped in sequence, the descriptors associated with these data also being grouped in sequence (21, 22, 23, 31, 32, 33),
20 - a description unit (25, 35) is constructed from at least one sequence (21, 22, 23, 31, 32, 33) containing at least one descriptor, each description unit (25, 35) containing only complete sequences (21, 22, 23, 31, 32, 33) of descriptors.
3. Method according to Claim 2 characterized in that a complete description
25 unit (25, 35) is transferred from a memory buffer (20, 30, 300a, 300b, 300c, 300d) onto the recording medium (11, 108) when the room available in the memory buffer (20, 30, 300a, 300b, 300c, 300d) is less than the memory room required to record therein a complete descriptor sequence (21, 22, 23, 31, 32).
- 30 4. Method according to Claim 2 characterized in that in that when the sequences (21, 22, 23, 31, 32, 33) of descriptors are of variable size, a

description unit (25, 35) is transferred from the memory buffer onto the recording medium (11, 108) when on concluding the addition of a descriptor into the memory buffer (20, 30, 300a, 300b, 300c, 300d), the memory buffer (20, 30, 300a, 300b, 300c, 300d) is full.

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5. Method according to Claim 3 characterized in that, following the recording of complete sequences (21, 22, 23, 31, 32) of descriptors of a memory buffer (20, 30, 300a, 300b, 300c, 300d) to the recording medium (11, 108), the descriptors contained at the end of the memory buffer (20, 30, 300a, 300b, 300c, 300d) and belonging to an incomplete sequence (33) of descriptors are transferred to the start of the memory buffer (20, 30, 300a, 300b, 300c, 300d).

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6. Method according to one of Claims 3 to 5 characterized in that, on concluding the storage of a description unit (25, 35) in the recording medium (11, 108), a new description unit (25, 35) is constructed in the memory buffer (20, 30, 300a, 300b, 300c, 300d) associated with the said description unit (25, 35) if the description units (25, 35) contained in this memory buffer (20, 30, 300a, 300b, 300c, 300d) are not currently being utilized and in another memory buffer (20, 30, 300a, 300b, 300c, 300d) if these description units (25, 35) are currently being utilized.

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7. Method according to Claims 3 to 5 characterized in that, on concluding the utilization of a description unit (25, 35), if the next description unit (25, 35) is not yet accessible on the recording medium (11, 108), then the description unit (25, 35) currently being constructed is utilized.

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8. Method according to Claim 7 characterized in that, when a description unit (25, 35) is simultaneously currently being constructed and utilized in one and the same memory buffer (20, 30, 300a, 300b, 300c, 300d), only the complete sequences (21, 22, 23, 31, 32) of descriptors are utilized.

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REPLACED BY
ART 34 AMDT.

9. Computer program product comprising program code instructions for the execution of the steps of the method of processing digital data descriptors according to one of Claims 1 to 8, when the said program is executed on a
5 computer.

10. Device for processing digital data descriptors stored in the form of description units (25, 35) of predetermined size, comprising

- 10
- means for constructing and for storing in memory buffers (20, 30, 300a, 300b, 300c, 300d) description units (25, 35) prior to their recording on a recording medium (11, 108),
 - means for utilizing the description units (25, 35) simultaneously with the construction and with the recording of description units (25, 35) of the same stream,

15 characterized in that

- the means of construction and of utilization are designed to use one and the same memory buffer for the construction and the utilization of the description units (25, 35).